

**REMARKS/ARGUMENTS**

Applicants submit this Amendment After Final (“Amendment”), in reply to the Final Office Action (“Office Action”) mailed March 31, 2006<sup>1</sup>.

In this Amendment, Applicants propose to amend claim 1 to improve clarity. Claims 1-7 remain pending in this application.

In the Office Action, the Examiner rejected claims 1-4 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,743,004 to Chobot et al. (“Chobot”) and rejected claims 5-7 under 35 U.S.C. § 103(a) as being unpatentable over Chobot.

At the outset, Applicants note that claim 1 has been amended to recite “the heat conducting apertured portion conducts heat from the solder-dip surface, and directs the heat to peripheral areas of the through-holed portion on the component mount surface.” Support for these changes to claim 1 can be found in the Applicants’ specification, for example, at page 6, lines 11-22, and page 11, lines 17-20.

**Claim Rejections Under 35 U.S.C. § 102(b)**

Applicants respectfully traverse the Examiner’s rejection of claims 1-4 under 35 U.S.C. § 102(b) as being anticipated by Chobot. In order to properly establish that Chobot anticipates Applicants’ claimed invention under 35 U.S.C. § 102, each and every element of each of the claims in issue must be found, either expressly described or under principles of inherency, in that single reference. Furthermore, “[t]he identical

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<sup>1</sup> The Office Action contains a number of statements reflecting characterizations of the related art and the claims. Regardless of whether any such statement is identified herein, Applicants decline to automatically subscribe to any statement or characterization in the Office Action.

invention must be shown in as complete detail as is contained in the . . . claim.” See M.P.E.P. § 2131, quoting *Richardson v. Suzuki Motor Co.*, 868 F.2d 1126, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

Chobot does not anticipate amended claim 1, for example, because the reference fails to teach each and every element of the claim. In particular, Chobot at least fails to teach the claimed combination, including, for example, a “heat conducting apertured portion [that] conducts heat from the solder-dip surface, and directs the heat to peripheral areas of the through-holed portion on the component mount surface,” as recited in amended claim 1.

The Examiner alleges that “Chobot et. al. teaches . . . a heat conducting apertured portion (Fig. 9, #33) . . . wherein the heat conducting apertured [portion] (Fig. 13, #40) conducts heat to (Fig. 13, squiggly lines and plated hole #35a and Col. 9, lines 58-61) peripheral area (Fig. 10, #21 on #1 [sic] top) [of] through-holed portion.” Office Action, page 2, ¶ 3. Chobot, however, discloses that “[t]he squiggly lines represent the flow of heat created during rework as it flows from the areas interior to the module and is redirected by the thermal vents and/or heat trap vias back toward the plated through hole.” Col. 9, lines 57-61. (Emphasis added). Thus, as illustrated by the “squiggly lines” of Fig. 13, Chobot discloses how heat trap vias 40 receive heat from the interior of the module, and direct the heat back to the plated through hole in a horizontal manner. Thus, Chobot fails to teach the claimed “heat conducting apertured portion [that] conducts heat from the solder-dip surface, and directs the heat to peripheral areas of

the through-holed portion on the component mount surface,” as recited in amended claim 1.

Accordingly, amended claim 1 is allowable over Chobot. Further, claims 2-4 are allowable at least due to their dependence from amended claim 1.

Claim Rejections Under 35 U.S.C. § 103(a)

Applicants respectfully traverse the Examiner’s rejection of claims 5-7 under 35 U.S.C. § 103(a) as being unpatentable over Chobot. In order to properly establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a), using a single reference, each of three requirements must be met. First, the reference must teach or suggest all the claim limitations. M.P.E.P. 2143.03 (8<sup>th</sup> ed., Rev. 3, August 2005). Second, there must be some suggestion or motivation, either in the reference itself or in the knowledge generally available to one of ordinary skill in the art, to modify the reference in a manner resulting in the claimed invention. M.P.E.P. 2143.01 (8<sup>th</sup> ed., Rev. 3, August 2005). Third, there must be a reasonable expectation of success that the proposed modification would work for the intended purpose. M.P.E.P. 2143.02 (8<sup>th</sup> ed., Rev. 3, August 2005). Moreover, the second and third requirements “must both be found in the prior art, not in applicant’s disclosure.” M.P.E.P. 2143 (8<sup>th</sup> ed., Rev. 3, August 2005).

With respect to the Examiner’s rejection of claims 5-7, Chobot does not teach or suggest the claimed combination, including, for example, a “heat conducting apertured portion [that] conducts heat from the solder-dip surface, and directs the heat to peripheral areas of the through-holed portion on the component mount surface,” as discussed above with respect to amended claim 1. Claim 1, therefore, is not

unpatentable over Chobot. Further, claims 5-7 are allowable over Chobot, at least due to their dependence from claim 1.

#### Claim Scope

In discussing the specification and claims in this Amendment, it is to be understood that Applicants are in no way intending to limit the scope of the claims to any exemplary embodiments described in the specification or abstract and/or shown in the drawings. Rather, Applicants believe that Applicants are entitled to have the claims interpreted broadly, to the maximum extent permitted by statute, regulation, and applicable case law.

#### Conclusion

Applicants respectfully request that this Amendment under 37 C.F.R. § 1.116 be entered by the Examiner, placing claims 1-7 in condition for allowance. Applicants submit that the proposed amendment of claim 1 does not raise new issues or necessitate the undertaking of any additional search of the art by the Examiner. Therefore, this Amendment should allow for immediate action by the Examiner.

Furthermore, Applicants respectfully point out that the final action by the Examiner presented some new arguments as to the application of the art against Applicants' invention. It is respectfully submitted that the entering of the Amendment would allow the Applicants to reply to the final rejections and place the application in condition for allowance.

Finally, Applicants submit that the entry of the Amendment would place the application in better form for appeal, should the Examiner dispute the patentability of the pending claims.

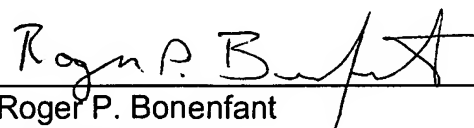
In view of the foregoing remarks, Applicants submit that this claimed invention, as amended, is neither anticipated nor rendered obvious in view of the prior art reference cited against this application. Applicants therefore request the entry of this Amendment, the Examiner's reconsideration and reexamination of the application, and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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Dated: June 19, 2006

By:   
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